

Appl. No. 10/542,132
Response to Office Action of June 30, 2006

PATENT
Docket No.: DE030025US
Customer No. 000024737

Amendment to the Drawings

The attached sheet of drawings includes changes to Figure 12. This sheet, which includes Figure 12 alone, replaces the original sheet including Figure 12. In Figure 12, labels have been added to the rectangular boxes.

Attachment: Replacement Sheet

Annotated Sheet Showing Changes

REMARKS

By this amendment, claims 1-11 have been amended. Claims 1-11 remain in the application. This application has been carefully considered in connection with the Examiner's Action. Reconsideration, and allowance of the application, as amended, is respectfully requested.

The Drawings

The drawings of Fig. 12 stands objected to for failing to comply with 37 CFR 1.83(a). By this amendment, Figure 12 has been amended to include labels for the rectangular boxes. Accordingly, objection of the drawings is now believed overcome.

The Specification

The specification stands objected to in view of the originally filed abstract. By this amendment, the abstract has been amended to contain proper language and place the same in proper format.

Rejection under 35 U.S.C. § 102

Claim 1

Claim 1 recites a power supply unit comprising:

a switching device (18) for converting an intermediate circuit voltage (U_Z) into a switched voltage (U_{WR});

a resonant circuit (20) that is fed by the switched voltage (U_{WR}) and has a transformer (T) for supplying an output voltage; and

a control device (30, 32) for setting at least one correcting variable (T_{PW}), the control device being configured for converting the correcting variable (T_{PW}) into values of wait time interval (T_W) and active phase time interval (T_P) for actuating the switching device (18) according to a non-linear relationship between T_P , T_W and T_{PW} for three operating modes of mixed mode modulation,

the three operating modes corresponding to low output power, medium output power, and high output power modes,

wherein the control device (30, 32) is configured to process sample values of at least a first actual value (U_{out}) which depends on the output voltage, and to calculate a time difference value (ΔU_{out}) from two sample values,

wherein the time difference value (ΔU_{out}) is multiplied by a first controller coefficient (k_{out}) and the result is used in the calculation of the correcting variable (T_{PW}), and

wherein the value of the first controller coefficient (k_{out}) is changeable as a function of the operating point of the power supply unit.

Support for the amendments to claim 1 (similarly, for claim 11), can be found in the specification on at least page 3, lines 13-23; page 4, lines 21-25; page 6, lines 20-34; and page 7, lines 1-31; and Figures 5 and 6.

Claims 1-11 were rejected under 35 U.S.C. § 102(b) as being anticipated by Aymard et al. (US 6,711,533). With respect to claim 1, Applicant respectfully traverses this rejection for at least the following reasons.

The PTO provides in MPEP § 2131 that

"[t]o anticipate a claim, the reference must teach every element of the claim...."

Therefore, with respect to claim 1, to sustain this rejection the Aymard reference must contain all of the above claimed elements of the respective claims. However, contrary to the examiner's position that all elements are disclosed in the Aymard reference, the latter reference does not disclose "... a control device for setting at least one correcting variable (T_{PW}), the control device being configured for converting the correcting variable (T_{PW}) into values of wait time interval (T_W) and active phase time

interval (T_P) for actuating the switching device according to a non-linear relationship between T_P, T_W and T_{PW} for three operating modes of mixed mode modulation, the three operating modes corresponding to low output power, medium output power, and high output power modes ...” as is claimed in claim 1.

In contrast, while the method of Aymard teaches controlling resonance generator, in particular, a *double-resonance* generator that includes an inductance coil L_r connected *in series with* a capacitor C_r *in parallel with* an inductance coil L_p, Aymard does not teach or suggest the “converting the correcting variable (T_{PW}) into values of wait time interval (T_W) and active phase time interval (T_P) for actuating the switching device according to a non-linear relationship between T_P, T_W and T_{PW} for three operating modes of mixed mode modulation, the three operating modes corresponding to low output power, medium output power, and high output power modes” as is claimed in claim 1 of the present application. Rather, Aymard teaches control T_{d(k)} which involves a static term T_{d0(k)} and a corrective term ΔT_{d(k)}, where the corrective term is defined by *five* variables – the *output voltage kV*, a *first voltage V_{cr}* at the terminals of the capacitor C_r of the resonant circuit, the *current I_{Lp}* crossing the inductance coil L_p of the resonant circuit, a *corrective integral term IT* and the *corrective term ΔT_d*, taken at the preceding sampling time. (See Aymard at Col. 4, lines 34-51; col. 8, lines 7-17 and FIGs. 1 and 3).

Therefore, the rejection is not supported by the Aymard reference and should be withdrawn. Accordingly, claim 1 is allowable and an early formal notice thereof is requested. Dependent claims 2-10 depend from and further limit independent claim 1 and therefore are allowable as well.

By this amendment, claim 11 has been amended in a similar manner with respect to the amendments to claim 1. Claim 11 is believed allowable over the Aymard

reference for reasons similar as stated herein above with respect to overcoming the rejection of claim 1. Accordingly, claim 11 is believed allowable and the rejection thereof should be withdrawn.

Conclusion

Except as indicated herein, the claims were not amended in order to address issues of patentability and Applicants respectfully reserve all rights they may have under the Doctrine of Equivalents. Applicants furthermore reserve their right to reintroduce subject matter deleted herein at a later time during the prosecution of this application or a continuation application.

It is clear from all of the foregoing that independent claims 1 and 11 are in condition for allowance. Dependent claims 2-10 depend from and further limit independent claim 1, and therefore are allowable as well. The amendments herein are fully supported by the original specification and drawings as discussed herein; therefore, no new matter is introduced. Issuance of an early formal notice of allowance of claims 1-11 is requested.

Respectfully submitted,



Michael J. Balconi-Lamica
Registration No. 34,291

Dated: 9/18/06

21004 Lakeshore Dr. W.
Spicewood, Texas 78669
Telephone: 512-461-2624
Facsimile: 512-264-3687
File: DE030025

Attachments

a-32658.114